

3-1

Practice

Form G

Inequalities and Their Graphs

Write an inequality that represents each verbal expression.

- 1.
- v
- is greater 10.

$v > 10$

- 2.
- b
- is less than or equal to
- -1
- .

$b \leq -1$

3. the product of
- g
- and 2 is less than or equal to 6.

$2g \leq 6$

4. 2 more than
- k
- is greater than
- -3
- .

$k + 2 > -3$

Determine whether each number is a solution of the given inequality.

5. $3y + 5 < 20$

a. 2 YES

b. 0 YES

c. 5 NO

6. $2m - 4 \geq 10$

a. -1 NO

b. 8 YES

c. 10 YES

7. $4x + 3 > -9$

a. 0 YES

b. -2 YESc. -4 NO

8. $\frac{3-n}{2} \leq 4$

a. 3 YES

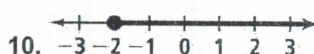
b. 2 YES

c. -10 NO

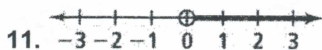
Write an inequality for each graph.

9. $-3 -2 -1 0 1 2 3$

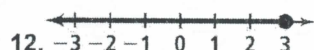
$x < 1$

10. $-3 -2 -1 0 1 2 3$

$x \geq -2$

11. $-3 -2 -1 0 1 2 3$

$x > 0$

12. $-3 -2 -1 0 1 2 3$

$x \leq 3$

Write each inequality in words.

13. $n < 3$

 n is less than 3

14. $b > 0$

 b is greater than 0

15. $-5 \leq x$

 x is greater than or equal to -5

16. $z \geq 3.14$

 z is greater than or equal to 3.14

17. $-4 < q$

 q is greater than -4

18. $18 \geq m$

 m is less than or equal to 18

What Happened When the Crossword Puzzle Champion Died?

Find the graph of the solution set of each inequality below in the corresponding column of graphs. Notice the letter next to it. Write this letter in each box containing the number of that exercise. Keep working and you will find out about this grave event.

① $x < 2$ T 3 O		⑩ $x < 1$ H 15 I	
② $x \leq 2$ W 7 X		⑪ $1 < x$ Y 17 D	
③ $x > 2$ O 9 G		⑫ $-3 \leq x$ C 10 M	
④ $x \geq 2$ A 4 A		⑬ $x > -3$ N 12 C	
⑤ $x \neq 1$ U 1 T		⑭ $x \neq -1$ R 18 S	
⑥ $x < -1$ E 8 H		⑮ $0 \geq x$ I 11 Y	
⑦ $x > -1$ X 6 E		⑯ $0 \leq x$ B 14 R	
⑧ $x \leq -1$ H 2 W		⑰ $0 > x$ D 16 B	
⑨ $x \geq -1$ G 5 U		⑱ $0 < x$ S 13 N	

1	8	6	11	16	5	14	15	6	17	8	15	10	18	15	7	17	3	2	13	4	13	17	6	15	9	8	1	4	12	14	3	18	18
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